



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,579	11/06/2000	Grzegorz J. Czajkowski	5181-72600	9650

7590 03/26/2004
B Noel Kivlin
Conley Rose & Tayon PC
PO Box 398
Austin, TX 78767-0398

EXAMINER

LAO, SUE X

ART UNIT	PAPER NUMBER
----------	--------------

2126

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/707,579

Applicant(s)

CZAJKOWSKI, GRZEGORZ J.

Examiner

S. Lao

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-19, 21-30 and 32 is/are rejected.
- 7) ☒ Claim(s) 10, 20 and 31 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Claims 1-32 are presented for examination.
2. Applicants discuss numerous prior art system, on pages 2, 3, 4, 6 and 16 of the specification as filed. Pertinent references describing these technologies are requested by the examiner so that they can be fully considered.
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1-9, 11-19, 21-30, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peek (U S pat. 5,481,706) in view of Gamma et al ("Design Patterns", pages 127-134).

As to claim 12, Peek teaches a system for sharing a function/method among a plurality of applications in a multitasking computer system (multithread computer system), the system comprising:

a plurality of applications (processes A, B) which are executable by the multitasking computer system, wherein the plurality of applications comprises a first application [it is noted that a process is typically a program in execution], and wherein the first application comprises a first thread (thread16);

wherein the first thread of the first application is executable to invoke (call) a method (function of shared library), wherein the method comprises an identifier (function descriptor 32), and wherein the identifier initially comprises an original value which associates the method with the first thread (via paths 36 and 48 of fig. 2); and

modifying the identifier in response to the first thread invoking the method (Foo call) such that the identifier comprises a temporary value (modified function descriptor

Art Unit: 2126

38), wherein the temporary value indicates that a single copy of the function/method is to be shared (locking by wrapper code) by the plurality of applications; and modify the identifier in response to exiting the method such that the identifier comprises the original value (remove the lock by the wrapper) which associates the method with the first thread. See col. 6, lines 6-57; col. 8, lines 18-46; fig.s 2-4.

Peek does not use object-oriented implementation, ie, function/method being encapsulated in a class, nor the class is executable to perform the modifying step.

Gamma teaches object-oriented function sharing (singleton pattern), wherein function/method to be shared is encapsulated in a class (singleton class), which is executable to manage the sharing (class itself responsible for keeping track of creation/access, page 127, section Motivation). See pages 127-134. Therefore, it would have been obvious to encapsulate the function/method to be shared in a class and to perform the modifying step (manage the sharing) by the class. One of ordinary skill in the art would have been motivated to combine the teachings of Peek and Gamma because this would have provided controlled access over how and when client can access the shared function/method (Gamma, page 128, section Consequences).

As to claim 13, Peek teaches the temporary value is a constant (new function descriptor 38, discussion of claim 12).

As to claim 14, Peek as modified teaches (Gamma) the class comprises one or more static variables (static instance, page 127, figure). The combination of Peek and Gamma would have provided that the temporary value indicates that a single copy of each of the static variables is to be shared by the plurality of applications.

As to claim 15, Peek teaches a second application (process B), wherein the second application comprises a second thread (thread18), and wherein the second thread is executable to invoke the method (fig. 1). Note discussion of claim 12 for encapsulating the method into the class. The combination of Peek and Gamma would have provided accessing the single copy of the class (singleton implementation of the class).

As to claims 16, 17, Peek teaches the function/method is a system/application resources (shared libraries, col. 1, lines 6-10).

Art Unit: 2126

As to claim 18, Peek as modified teaches a virtual machine (Windows, Gamma, page 127) which is configured to execute the plurality of applications. It is noted that Windows OS is also termed Windows VM.

As to claim 19, note discussion of claim 12 for modifying the identifier in response to invoking the method and modifying the identifier in response to exiting the method. It would have been obvious to package these steps into a identifier-switching program. Note discussion of claim 12 for object-oriented implementation with classes.

As to claim 21, Peek teaches the plurality of applications are executable in a platform-independent programming environment (DCE, col. 2, line 14).

As to claims 1-7, these are the method claims of claims 12-18, thus note claims 12-18, respectively, for discussions.

As to claims 8, 29, Peek as modified teaches extracting one or more static fields from the class (Gamma, static instance, singletonData, page 127); creating a separate copy of the one or more static fields for each of the plurality of applications that utilizes the class (Peek, private copy 20 for program/process A, private copy 22 for program/process B), wherein each of the separate copies corresponds to one of the plurality of applications (Peek, fig. 1, col. 4, line 46 – col. 5, line 24); and creating one or more access methods for the one or more static fields (Gamma, SingletonOperation(), GetSingletonData(), page 127), wherein the access methods are operable to access the corresponding separate copy of the one or more static fields based upon the identity of the utilizing application (Peek, col. 4, line 46 – col. 5, line 24).

As to claims 9-11, these are the method claims of claims 19-21, thus note claims 19-21, respectively, for discussions.

As to claims 22-28, these are program product claims of claims 1-7, thus note claims 1-7, respectively, for discussions.

As to claims 30-32, these are program product claims of claims 9-11, thus note claims 9-11, respectively, for discussions.

Art Unit: 2126

5. Claims 10, 20, 31 are objected to as being dependent upon respective rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the respective base claim and any intervening claims.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Lao whose telephone number is (703) 305-9657. A voice mail service is also available at this number. The examiner's supervisor, SPE Meng-Ai An, can be reached on (703) 305 9678. The examiner can normally be reached on Monday - Friday, from 9AM to 5PM. The fax phone number for the organization where this application or proceeding is assigned is (703) 872 9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

Sue Lao



March 17, 2004